



PATRICK J. HRDLICKA

CHEMISTRY, COLLEGE OF SCIENCE

Patrick J. Hrdlicka is an associate professor in the University of Idaho Department of Chemistry. He came to the university in 2006 after earning his bachelor's, master's and doctoral degrees in chemistry at the University of Southern Denmark.

Hrdlicka's research focuses on nucleic acid chemistry – a specialized field that is largely undeveloped at many other American universities. His central project is to develop molecular tools that can detect, regulate and modify genes. His lab has created a class of molecules for this purpose known as Invaders.

"Invaders show great promise for detection and regulation of genes involved in diseases," he said. "By knocking down these genes, a disease may become treatable at the genomic level."

A Wisconsin-based biotechnology company has signed an exclusive licensing agreement for this technology for diagnostic applications in animal reproductive science.

The letters nominating Hrdlicka for the Excellence Award recognize his contributions to chemistry research at the university and worldwide.

"Patrick has already developed a well-funded and diverse research program encompassing fundamental science, therapeutics, materials science and nanotechnology," wrote Bruce Armitage, co-director of the Center for Nucleic Acids Science and Technology at Carnegie Mellon University.

Hrdlicka has authored more than 30 papers in peer-reviewed journals since 2006, including the cover story for the Journal of Organic Chemistry in January 2013. Work from his laboratory has been cited more than 600 times, and he has filed numerous patent applications.

In addition, he has obtained more than \$1.5 million in external grants from the National Institute of Health, the Department of Defense Office of Naval Research, the IDeA Network of Biomedical Research Excellence and the Idaho State Board of Education. He was the youngest person nationwide to win the highly competitive NIH Exception, Unconventional Research Enabling Knowledge Acceleration (EUREKA) award at the time he won it, as well as the first Idahoan.

On the university level, Hrdlicka has received the 2010 College of Science Early Career Award, the 2013 Innovation Award and the 2013 President's Inaugural Mid-Career Faculty Award.

Hrdlicka's nominators also praised his teaching and mentoring abilities. During his time at U-Idaho, his lab has hosted 13 graduate researchers including visiting students, 17 undergraduate researchers and 2 postdoctoral researchers.

Hrdlicka said he hopes to continue his collaborative work in nanotechnology and the physical and biological sciences at the University of Idaho, as well as see improved research infrastructure and opportunities for students.

"I would like to continue to be able to give students the ability to immerse themselves in this field, which positions them very uniquely in the job market," he said.

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